

## APPENDIX C

### REFINERY OPERATING PROCEDURES



## **DRILLING/BORING/EXCAVATION ON REFINERY PROPERTY- CONTRACTORS**

**Purpose** The intent of this policy is to offer a guideline for safe and efficient drilling on refinery property for soil boring, product recovery and remediation activities, utility placement, foundation placements, and other activities where the surface within the confines of the refinery boundaries are to be disturbed by any mechanical drilling/boring/excavation method.

**Applicability** Applies at all ARG facilities in Bradford, PA

**Definitions** none

**Requirements** 1. Contractors are required to follow the following American Refining Group policies and documents while conducting any work activity at ARG.

General Conditions-

- General Safety Order No. 1
- Contractor insurance requirements and liability information
- Beard Policy
- Smoking Policy
- Nomex Policy
- Cell Phone Policy
- Contractor Drilling/Boring Policy

2. Contractors must provide PROTECTION FOR OIL AND CHEMICAL EXPOSURE due to direct contact with SOIL AND GROUNDWATER—contractor who will be in contact with soil and groundwater through drilling/boring and excavating MUST check with EHS Department to review existing site characterization reports and in turn formulate a health and safety plan that protects his/ her employees from direct contact with oil and chemical constituents in soil, groundwater and air contaminants in each work area.

At a minimum ARG expects that the contractor's health and safety plan will include PPE that eliminates direct contact with oil and chemicals in soil, water, and air. PPE may include but is not limited to the following: gloves and boots impervious to the constituents present and respirators to protect from air contaminants. Additional equipment may be needed based on the contractor's safety plan developed after reviewing the site characterization reports.

3. Contractors must submit written Drilling/ Boring/ Excavation Notification to ARG's VP of Compliance 30-days prior to any drilling/boring/ excavating activity. Six (6) copies of the notification are required. The Notification must include:
- map(s) that clearly mark the drilling/boring/ excavating locations and,
  - well names and/or boring/ excavating names marked on the maps and,
  - a conceptual drilling/boring/ excavating work plan with proposed dates for the drilling/ boring/ excavating (proposed schedule) and,
  - the names of all participating subcontractors.

Contractor must contact ARG's VP of Compliance to determine who is assigned as ARG's Project Manager covering the scope of work being described in the Drilling/ Boring/Excavation Notification within 1 week after submitting the Drilling/ Boring/ Excavating Notification.

4. Contractor must notify ARG's Project Manager to coordinate the marking of locations. Contractors must mark proposed drilling/boring/excavating locations in the field with either high visibility marking paint, painted wooden stakes or surveyors flags at least 30 business days before drilling/boring activity is to commence. The marks should indicate the well name or boring name.
5. Contractors, all participating personnel must initially obtain ARG's Contractor Safety Orientation before commencing with any work. Contractors must maintain a valid safety orientation card (renewed annually).
6. Contractors, drilling/boring/excavation is prohibited without ARG's "Drilling/Boring Permit-". A Drilling/Boring Permit must be obtained for each drilling/boring location. "Hot Work Permits" will be required for all drilling/ boring activities where motorized drilling equipment is used. These permits are required each day and are issued by the Safety Department. IF WELDING/ CUTTING/ GRINDING need to be done in addition to drilling/ boring activities, a separate "Hot Work Permit" will be needed to verify a safe atmosphere prior to welding/ cutting/ grinding. Fire Watch is required for all Hot Work done in the facility. New permits are required each day and are issued by the Safety Department.
7. Contractors, in the event that the drilling/boring/ excavating work plan changes during the actual drilling/boring/excavating activities (move or add



locations), the contractor must stop and notify the ARG Project Manager. The new drilling/ boring/ excavating location will have to be approved prior to commencing work.

8. Contractors, drilling/boring/excavating hours are typically limited from 7:00 a.m. to 3:30 p.m., Monday through Friday. Drilling/boring/ excavating cannot be conducted outside these hours unless issued permission by ARG's Safety Department.
9. Contractors, there are many unknown underground utility/obstructions, always advance at a slow pace when drilling/boring/ excavating from 0' to 5' below ground surface.
10. Contractors, if any underground utility/obstruction is encountered while drilling/boring/ excavating, immediately stop; then, promptly contact ARG's Project Manger. Do not re-start the drilling/boring/ excavating equipment until ARG has issued the approval.
11. Contractors, if safety warrants it, hand digging will be required to expose underground utility/obstructions. Hand digging must continue until ARG approves that the location is safe to resume with motorized drilling/boring/ excavating equipment.
12. Contractors, if any underground lines are exposed or penetrated by the drilling/boring/ excavating activity, the rig must be immediately shut down, de-energized, and left as is. The contractor shall then inform ARG's Project Manager. The ARG Project Manager will advise the contractor of the course of action to be taken.
13. Contractors are responsible for the proper containment and proper disposal of all "waste/spoils" generated and associated with the drilling/boring/ excavating activities.

**Record  
Keeping**

Completed permits and approvals are maintained for 1 year from the date of the issuance of the permit. They are maintained in files in the Safety Office in file titled "Permits- Drill/ Boring/ Excavating Completed".

**Related  
Documents**

Drilling/ Boring Approval Form- FORMS\SAF-006 BORING DRILLING APPROVAL FORM.xls

Drilling/ Boring Permit- Contractors- FORMS\SAF-008 CONTRACTOR BORING DRILLING PERMIT.xls

**Audit**

None

## Checklist

**Best Practices**            None



# DRILLING/ BORING/ EXCAVATING- APPROVAL FORM

Project Manager: Complete items in the shaded areas

Location of Work:

Co./ Dept./ Boring Work:

Project Manager: Initial this form as a representative of the

Notification sent to the following: (List names, titles, and phone numbers)

Call Before You Dig (800-243-7775) completed and OK'd for this site

ARG Approval: Initial each column next to your Dept. if approved. \*Indicate changes/ concerns below in space provided.

ID Name:	Overhead piping	Water lines	Overhead Electric	Piping	Sewer	Drains	Electrical	Other factors:
Safety								
Engineering								
Process Supv.								
Environmental								
Project Mgr.								

Comments/ Notices of concern/ well/boring/excavating location movement:

ARG Approval: Initial each column next to your Dept. if approved. \*Indicate changes/ concerns below in space provided.

ID Name:	Overhead piping	Water lines	Overhead Electric	Piping	Sewer	Drains	Electrical	Other factors:
Safety								
Engineering								
Process Supv.								
Environmental								
Project Mgr.								

Comments/ Notices of concern/ well/boring/excavating location movement:

ARG Approval: Initial each column next to your Dept. if approved. \*Indicate changes/ concerns below in space provided.

ID Name:	Overhead piping	Water lines	Overhead Electric	Piping	Sewer	Drains	Electrical	Other factors:
Safety								
Engineering								
Process Supv.								
Environmental								
Project Mgr.								

Comments/ Notices of concern/ well/boring/excavating location movement:



**AMERICAN REFINING GROUP, INC.**  
**CONTRACTOR- DRILLING/ BORING/ EXCAVATING PERMIT**

This PERMIT applies to the wells/borings/excavations approved on the reverse side of this sheet.

Location of work: \_\_\_\_\_  
Contractor Doing Work: \_\_\_\_\_  
ARG Project Manager: \_\_\_\_\_  
Ph. # of project Manager: \_\_\_\_\_

Permit Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
Permit time: \_\_\_\_ to \_\_\_\_  
Extended time: \_\_\_\_\_  
Approved by: \_\_\_\_\_

Contract employer must review and sign:

Based on my evaluation of the Site Characterization Report for the areas where the work below is to be done, the PPE indicated in the 'Required PPE' section below is required to protect from the hazardous constituents that may be present:

\_\_\_\_\_  
(PRINT Contract employer name)

\_\_\_\_\_  
(Signature of Contract employer)

	ID Name:	ID Name:	ID Name:
Type of Work: (i.e. WELL BORING EXCAVATION)			
Equipment being used: (Motorized drilling equip., hand auger, backhoe, etc.)			
<b>Job Site Preparation:</b>	<b>Required PPE (check all that apply):</b>		
____ Scope of Job explained to workers.	X ____ Nomex	____ Hearing Protection	
____ Review safety "Notices" listed below.	X ____ Hard Hats	____ Gloves	
____ Other	X ____ Eye Protection	Type: _____	
	Type: _____	Other PPE	
	Respirator	Type: _____	
	Type: _____	Type: _____	

Unusual Hazards Possible:

Names of those working this permit:

**Notice to Contractors/ those working this permit:**

**\*\*CONTRACTORS MUST CHECK WITH EHS DEPT. TO REVIEW EXISTING SITE CHARACTERIZATION REPORTS TO FORMULATE A SAFETY PLAN TO PREVENT CONTACT WITH OIL AND CHEMICAL CONSTITUENTS INCLUDING CONTACT AND AIR CONTAMINATION CONSIDERATIONS.**

1. Work hours are 6 a.m.- 2:30 p.m. Requests to work outside these hours should be directed to ARG Project Manager.
2. Proceed slowly from 0' to 5' below ground surface
3. If underground utility/ obstruction/ lines encountered, stop, de-energize equipment, contact ARG Project Manager.
4. Hand digging may be required by ARG at any time.
5. If adding or relocating a well/ boring, contact ARG Project Manager prior to digging.
6. Emergencies: Notify Watchblock X1297 from any plant phone or by Radio at any location
7. **This permit** applies to the current locations and the type of work being done as specified above. Any changes to the work plan must be conveyed to ARG Project Manager for approval before commencing.
8. **This permit** grants permission to perform drilling/ boring/excavaton activity. In addition **HOT WORK PERMITS** are needed for motorized drilling/ boring/ excavating equipment. Separate **HOT WORK PERMIT** is needed at the time any welding/ cutting/ grinding or other types of "HOT WORK" are being done.
9. Contact EHS Department for all permits.

I CERTIFY THAT I HAVE EXAMINED THE WORK SITE AND FIND IT SAFE FOR THE WORK LISTED ABOVE.

\_\_\_\_\_  
PROCESS SUPERV.

\_\_\_\_\_  
UNIT OPERATOR

\_\_\_\_\_  
CONTRACTOR/ MAINT. REP.

\_\_\_\_\_  
ARG PROJECT MGR.

\_\_\_\_\_  
EHS DEPT.

SEE REVERSE FOR DRILL/BORE/EXCAV. APPROVAL FORM

ISSUE DATE: 6/14/05

SAF 008

PG 1 OF 1

REV DATE: 7/20/05



## Occupational Exposure Monitoring

- Purpose** To assess and monitor employee exposures to chemical, physical and biological agents in the workplace in order to verify controls, document compliance with applicable limits and identify situations where additional actions may be required to protect health.
- Applicability** Applies to all locations where exposures may occur to chemical, biological or physical agents.
- Definitions**
- Biological Agents* Bacteria, fungi, viruses, allergens, biotoxins pharmaceuticals, biological organisms or biologically active materials that may present a human health hazard.
- Chemical Agents* Dusts, fumes, gases, solvents, vapors, compounds or other substances that may present a human health hazard, excluding biological and physical agents.
- Physical Agents* Noise, vibration, ionizing and non-ionizing radiation, lasers, temperature extremes and other physical phenomenon that may present a human health hazard.
- Exposure Assessment* A qualitative, written evaluation of potential employee exposures to chemical, physical and biological agents in the workplace.
- Exposure Monitoring* A quantitative evaluation or measurement of biological, chemical or physical agents that represents actual employee exposure levels to those agents.

- Requirements**
- A. Exposure Assessments
1. Each location where exposure to chemicals, biological or physical agents may occur shall have a documented exposure assessment.
  2. Exposure assessments shall identify those employees potentially exposed to chemical, biological or physical agent(s), and an evaluation of the exposure level based on any existing exposure monitoring results, as well as existing process designs, methods, ventilation and control practices.
  3. Exposure assessments shall be reviewed and updated annually or upon significant changes in work processes, equipment or materials.
- B. Exposure Monitoring Plan
1. A monitoring plan shall be developed to measure or re-measure representative employee exposures to biological, chemical and physical agents. Plans shall be updated annually.
  2. Monitoring plans shall include documentation concerning the rationale used to make sampling decisions. Monitoring plans shall place priority on those biological, chemical and/or physical agents that may lead to the highest exposure potentials. Monitoring plans shall also include, to

the extent feasible, exposures for which baseline monitoring data is currently not available.

**C. Follow-Up to Monitoring Results**

1. Where monitoring results indicate an exposure at or above regulated exposure limits, follow-up action(s) shall be promptly taken to reduce the exposure level. Follow-up actions may include implementation of substitute materials, methods to eliminate the exposure, implementation of additional engineering controls or administrative controls. In the interim, employees must be protected through temporary engineering or administrative controls or use of effective personal protective equipment.
2. Follow-up actions taken or planned in response to exposure monitoring results, shall be documented.

**D. Communication of Monitoring Results**

1. Exposure monitoring results shall be communicated to affected employees through written notifications, postings, meetings or other means. Communications shall be documented.

**Related Documents**

Title 29—Labor  
Part 1910—General Industry Safety and Health Regulations  
Subpart Z—Toxic and Hazardous Substances  
29 CFR 1910.1000—Air Contaminants